



# The style files

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## Prefer active writing to passive

I propose this note as the first of a series to encourage better writing skills among mathematicians. Why? Because many technical articles I read as an editor are boringly turgid. We and our students must do better. We must do better not only to communicate with each other, but with employers and the wider community.

*If you ... have strong communications skills and leadership potential, can write reports ... you are the type of employee we are looking to recruit.* (Australian Bureau of Statistics)

But, you say, “I have tried to read Roberts’ research articles before and made no sense of them”. Unfortunately true—I seek to pass on the wisdom of others rather than my considerably poorer practise.

Each note, and I plan eight at the moment, will address one aspect of English usage. Each aspect may be only a small point in itself. But improving many little aspects will empower you to write with much better effect.

### Use the active voice

Active writing is more direct and vigorous than passive writing. For example, [2, §11]

*Passive:* My first visit to Boston will always be remembered by me.

*Active:* I shall always remember my first visit to Boston.

The latter version is more direct, bold and concise. Active writing adds life and movement, whereas consistently passive writing weakens communication [1, §4.4]. Prefer to write “X did Y” to “Y was done by X”. Three examples demonstrate such revision:

*Passive:* The answer was provided to sixteen decimal places by Gaussian elimination.

*Active:* Gaussian elimination gave the answer to sixteen decimal places.

*Passive:* Gene expression in 40 tumour and 22 normal colon tissue samples was analyzed with an Affymetric oligonucleotide array.

*Active:* An Affymetric oligonucleotide array analyzed gene expression in 40 tumour and 22 normal colon tissue samples.

*Passive:* An investigation focusing on higher blockage effects was carried out by Sahin and Owens (2004).

*Active:* Sahin and Owens (2004) focused on higher blockage effects.

Observe in these examples that, to eliminate the passive “was verb”, I recommend you attribute action to methods, equipment or people. As well as revising to avoid most “was verb” constructs, similarly revise to avoid most “is verb” constructs. I give two examples: the first reaffirms how reordering the sentence and attributing the action promotes active writing.

*Passive:* The error for the Atkinson problem is plotted in Figure 5.

*Active:* Figure 5 plots the error for the Atkinson problem.

*Passive:* The explicit Euler method is dominant in the extant literature of computational finance.

*Active:* The explicit Euler method dominates computational finance.

### Why is passive writing so popular?

Perhaps it self perpetuates: our students copy not only our good habits, but also our bad. But passive writing must also be easier. Perhaps passive writing is perpetuated by the natural habit to put first in the sentence the first thing that comes to mind. Revise your writing to put methods or people first when reasonable. *Students often cling blindly to what they perceive as correctness — a formula consisting (almost invariably) of third person, passive voice, cliches and far too many quotations from secondary sources* (Susan Thomas, The Australian, July 14, 2004)

Observe in the examples that the active

voice makes for forcible writing. Tame descriptions and expositions become lively and emphatic in the active voice. Consequently, you must have the courage to be direct and assertive, rather than insipidly passive.

However, do not entirely discard the passive voice. Instead, employ it when necessary to invoke appropriate emphasis. For example, a passive sentence may be necessary to bring a key phrase to the start of the sentence in order to set the scene for the sentence.

### Summary:

Avoid passive phrases such as most “was” or “is” verbs. How? Attribute action to people or methods.

### References

- [1] N.J. Higham, *Handbook of writing for the mathematical sciences*, 2nd edn (SIAM 1988).
- [2] W. Strunk Jr, *The Elements of Style* (W. P. Humphrey 1918), <http://www.bartleby.com/141>.

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